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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,558	11/26/2002	Kenneth M. Williamson	440571/PALL	6695
23548	7590	01/26/2006	EXAMINER	
LEYDIG VOIT & MAYER, LTD 700 THIRTEENTH ST. NW SUITE 300 WASHINGTON, DC 20005-3960			KIM, YOON YOUNG	
			ART UNIT	PAPER NUMBER
			1723	

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/088,558

Applicant(s)

WILLIAMSON ET AL.

Examiner

Yoon-Young Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-10,22-28 and 33-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-10,22-28 and 33-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

This Office Action is in response to the Amendment filed on November 4, 2005.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1, 4-10, 22-28, and 33-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Pall, U.S. Patent No. 4,154,688.

Regarding Claim 1, Pall discloses a filter element comprising a pleated composite including a filter layer (#2) having first and second sides, and a first functional drainage layer (#6) disposed proximate the first side of the filter layer, the functional drainage layer and having a lower edgewise flow resistance than the filter layer (Col. 4, Lines 6-24), wherein the pleated composite has a plurality of pleats, each having first and second legs, the first leg contacting the second leg of the same pleat and the second leg of an adjacent pleat over a substantial portion of the height of the first leg and wherein the first functional drainage layer is positioned within the pleats to pass fluid in an edgewise direction through the first functional drainage layer along the first side of the filter layer, the filter being treated by the functional material (Col. 4, Lines 12-24), and the filter layer is positioned within the pleats to pass fluid in a thickness direction through the filter layer, the fluid being filtered by the filter layer.

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Regarding Claim 4, Pall discloses that the first leg contacts the second leg of the same pleat and the second leg of an adjoining pleat over a substantially continuous region extending for a substantial portion of the height of the first leg and over at least 50 percent of an axial length of the filter element (Fig. 3).

Regarding Claim 5, Pall discloses that the pleated filter element includes a second drainage layer (#5) disposed on the second side of the filter layer and comprising a functional material (Col. 4, Lines 12-24) and also having a lower edgewise flow resistance than the filter layer (Col. 4, Lines 6-24).

Regarding Claim 6, Pall in view of Insley discloses that the first functional drainage layer comprises a porous fibrous sheet ('688, Col. 4, Lines 4-24) containing the functional material ('824, Col. 4, Line 59 – Col. 5, Line 4).

Regarding Claim 7, Pall discloses that the first functional drainage layer contacts the filter layer (Fig. 1).

Regarding Claim 8, Pall discloses that the filter element is cylindrical (Fig. 3).

Regarding Claim 9, Pall discloses that the plurality of pleats each have a radially outer end displaced in a circumferential direction of the filter element with respect to a radially inner end of the pleat (Fig. 1).

Regarding Claim 10, Pall discloses that the pleats are substantially parallel to each other (Fig. 3).

Regarding Claim 22, Pall discloses a method of treating a fluid comprising: passing a fluid in a thickness direction through a filter layer (Col. 8, Lines 18-20) and in an edgewise direction through a drainage layer along a first side of the filter layer of a pleated filter composite to filter the fluid in the filter layer (Col. 8, Lines 54-59) and to treat the fluid with a functional material in the functional drainage layer.

Regarding Claim 23, Pall discloses passing the fluid through a second drainage layer disposed along a second side of the filter layer (Col. 8, Lines 54-59).

Regarding Claim 24, Pall discloses passing the fluid in an axial direction of the pleated filter between opposite lengthwise ends thereof (Col. 8, Lines 54-59).

Regarding Claim 25, Pall discloses that passing the fluid edgewise through the first functional drainage layer includes passing the fluid edgewise through the first functional drainage layer includes passing the fluid primarily in an axial direction of the filter element edgewise through the first functional drainage layer (Col. 8, Lines 54-59).

Regarding Claim 26, Pall discloses that passing the fluid edgewise through the first functional drainage layer includes passing the fluid primarily in an axial direction of the filter element edgewise through the first functional drainage layer primarily along a height of the pleats (Col. 8, Lines 54-59).

Regarding Claim 27, Pall discloses that passing the fluid edgewise through the first functional drainage layer includes passing the fluid primarily in an axial direction of the filter element edgewise through the first functional drainage layer to the root of the pleats (Col. 8, Lines 54-59).

Regarding Claim 28, Pall discloses that passing the fluid edgewise through the first functional drainage layer includes passing the fluid edgewise (Col. 8, Lines 54-59).

Regarding Claim 33, Pall discloses that the functional drainage layer is more coarse than the filter layer and performs substantially no removal of particles from the fluid (Col. 4, Line 12-24).

Regarding Claim 34, Pall discloses that the fluid passes edgewise through the functional drainage layer before passing in a thickness direction through the filter (Col. 8, Lines 18-20).

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Regarding Claim 35, Pall discloses that the fluid passes in a thickness direction through the filter before passing edgewise through the functional drainage layer (Col. 8, Lines 18-20).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pall in view of Karachevtcev et al., U.S. Patent No. 5,988,400.

Regarding Claim 3, Pall discloses the functional drainage layer has an edgewise flow resistance that is lower than that of the filter layer (Col. 4, Lines 6-24) but does not disclose that the resistance is at most approximately 50% that of the filter layer. Karachevtcev teaches a filter element having filter layers with a difference in flow resistance that is at most approximately 50% (Col. 6, Lines 3-10). Since the pore sizes have a difference of less than 50% the flow resistance will be less than 50% as well. One of skill in the art would by routine

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experimentation find the optimum flow resistance. It would have been obvious to one of skill in the art to make the flow resistances of Pall as so desired or required, including as claimed to optimize filtration.

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1, 3-10, 22-28, and 33-35 have been considered but are moot in view of the new ground(s) of rejection.

Pall in view of Karachevtcev teaches the invention as claimed.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yoon-Young Kim whose telephone number is (571) 272-2240. The examiner can normally be reached on 8:30-4:30, Mon-Fri.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on (571) 272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YK  
01/23/06

  
JOHN KIM  
Primary PATENT EXAMINER